IN THE CLAIMS:

1. (Currently Amended) An organic electroluminescence device emitting white light which comprises a pair of electrodes, at least two light emitting layers and an electron transporting layer comprising a heterocyclic derivative having a nitrogen atom or a heterocyclic derivative having silicon atom, the light emitting layers and the electron transporting layer being disposed between the pair of electrodes, wherein

an energy gap of a host compound comprised in each light emitting layer Eg(Host-i) satisfies following relation (I):

$$2.9 \text{ eV} \leq \text{Eg(Host-i)} \qquad \cdots \text{(I)}$$

wherein Eg(Host-i) represents an energy gap of a host compound comprised in an i-th light emitting layer from the electron transporting layer, i representing an integer of 1 to n,

an energy gap of the heterocyclic derivative having <u>a</u> nitrogen atom or the heterocyclic derivative having silicon atom comprised in the electron transporting layer Eg(ETM) satisfies following relation (II):

$$2.9 \text{ eV} < \text{Eg(ETM)} \qquad \cdots \text{(II)}$$

and

an ionization potential of a host compound comprised in a light emitting layer adjacent to the electron transporting layer (Ip(Host-1)) and an ionization potential of the heterocyclic derivative having a nitrogen atom or the heterocyclic derivative having silicon atom comprised in the electron transporting layer (Ip(ETM)) satisfy following relation (III):

$$Ip(ETM) \le Ip(Host-1) + 0.3 \text{ eV} \cdots (III)$$

wherein the host compound is capable of emitting blue light and is selected from the group consisting of anthracene derivatives, styryl derivatives, aromatic amines, aluminum chelates having mixed ligands and carbazole derivatives;

the energy gap is an excited singlet energy gap which is determined by obtaining an

absorption spectrum of a 10⁻⁵ mole/liter toluene solution of a sample using an ultraviolet visible

absorption meter and converting a wavelength at an absorption end on the absorption spectrum

into energy value; and

the ionization potential is measured by obtaining a curve showing a change of discharged

photoelectrons with a photon energy of irradiation using a photoelectron spectrometer, and

determining by extrapolation a threshold value of the discharge of photoelectrons on the curve.

2. (Currently Amended) The organic electroluminescence device emitting white

light according to Claim 1, wherein the energy gap of a host compound comprised in each light

emitting layer Eg(Host-i) and the energy gap of the heterocyclic derivative having a nitrogen

atom or the heterocyclic derivative having silicon atom comprised in the electron transporting

layer Eg(ETM) satisfy following relation (IV):

$$2.9 \text{ eV} < \text{Eg(ETM)} \le \text{Eg(Host-i)} \qquad \cdots \text{(IV)}$$

3. (Previously Presented) The organic electroluminescence device emitting white

light according to Claim 1, wherein at least one light emitting layer comprises a dopant having

an energy gap of 2.9 eV or smaller.

4. (Previously Presented) The organic electroluminescence device emitting white

light according to Claim 1, which comprises at least two light emitting layers having different

peak wavelengths of light emission.

5. (Previously Presented) The organic electroluminescence device emitting white

light according to Claim 1, wherein a difference between a greatest peak wavelength of light

emission and a second greatest peak wavelength of light emission is 50 nm or greater.

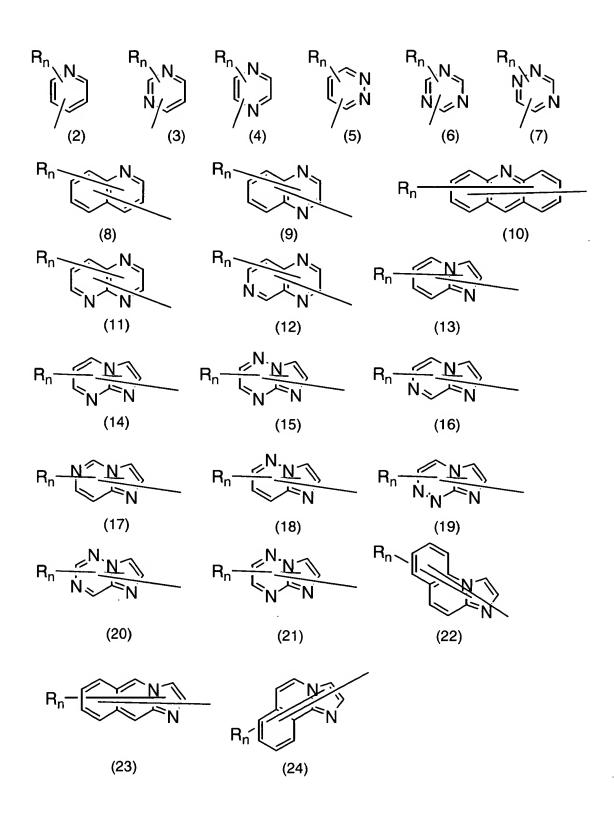
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- 6. (Original) The organic electroluminescence device emitting white light according to Claim 1, wherein the electron transporting layer or an interfacial region between the electron transporting layer and a cathode comprises a metal having a work function of 2.8 eV or smaller or a compound of the metal.
- 7. (Original) The organic electroluminescence device emitting white light according to Claim 6, wherein the metal is Na, K, Rb, Cs, Ca, Sr or Ba.
- 8. (Currently Amended) The organic electroluminescence device emitting white light according to Claim 1, wherein the electron transporting layer comprises a heterocyclic derivative having <u>a</u> nitrogen atom represented by following general formula (1):

$$HAr-L-Ar^{1}-Ar^{2}$$
 (1)

wherein HAr represents a substituted or unsubstituted heterocyclic group having \underline{a} nitrogen atom, Ar^1 represents a substituted or unsubstituted divalent aromatic hydrocarbon group having 6 to 40 carbon atoms, Ar^2 represents a substituted or unsubstituted aryl group having 6 to 40 carbon atoms or a substituted or unsubstituted heteroaryl group having 3 to 40 carbon atoms, and L represents a single bond or a substituted or unsubstituted arylene group.

9. (Currently Amended) The organic electroluminescence device emitting white light according to Claim 8, wherein HAr represents a heterocyclic group represented by one of following formulae (2) to (24):



wherein R represents a substituted or unsubstituted aryl group having 6 to 40 carbon atoms, a substituted or unsubstituted heteroaryl group having 3 to 40 carbon atoms, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms or a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, **n** represents an integer of 0 to 5 and, when **n** represents an integer of 2 or greater, a plural R may represent a same group or different groups, and the plurality of groups represented by R may be bonded to each other to form a cyclic structure; and formula (A):

$$\begin{bmatrix}
N \\
Z
\end{bmatrix}_{\mathbf{X}}$$
(A)

wherein a plural R¹ each independently represent hydrogen atom, a halogen atom, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms, a substituted or unsubstituted aryl group having 6 to 40 carbon atoms, a substituted or unsubstituted heteroaryl group having 3 to 40 carbon atoms or a group forming a condensed aromatic group, Z represents oxygen atom, sulfur atom or a group represented by NR', R' representing a same atom or group as that represented by R¹, and x represents an integer of 2 to 8; or a substituted or unsubstituted carbazolyl group.

10. (Original) The organic electroluminescence device emitting white light according to Claim 8, wherein HAr represents a group expressed by one of following formulae (25) to (44):

11. (Original) The organic electroluminescence device emitting white light according to Claim 8, wherein L represents a group represented by one of following formulae (45) and (46):

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wherein R^2 represents a substituted or unsubstituted aryl group having 6 to 40 carbon atoms, a substituted or unsubstituted heteroaryl group having 3 to 40 carbon atoms, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms or a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, \mathbf{m} represents an integer of 0 to 4 and, when \mathbf{m} represents an integer of 2 or greater, a plural R^2 may represent a same group or different groups, and a plural group represented by R^2 may be bonded to each other to form a cyclic structure.

12. (Original) The organic electroluminescence device emitting white light according to Claim 8, wherein Ar² represents a group represented by one of following formulae (47) to (53):

$$R^{3}p$$
 $R^{3}p$
 $R^{3}p$

wherein ${\bf R}^3$ represents a substituted or unsubstituted aryl group having 6 to 40 carbon atoms, a

substituted or unsubstituted heteroaryl group having 3 to 40 carbon atoms, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms or a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, **p** represents an integer of 0 to 9, **q** represents an integer of 0 to 5 and, when **p** or **p+q** represents an integer of 2 or greater, a plural R³ may represent a same group or different groups, and a plural group represented by R³ may be bonded to each other to form a cyclic structure.

13. (Original) The organic electroluminescence device emitting white light according to Claim 8, wherein Ar¹ represents a group represented by one of following formulae (54) and (55):

$$R^{5}$$
 R^{6}
 R^{7}
 R^{8}
 R^{9}
 R^{10}
 R^{12}
 R^{17}
 R^{17}
 R^{18}
 R^{16}
 R^{15}
 R^{15}
 R^{15}
 R^{15}
 R^{15}

wherein R⁴ to R¹⁷ each independently represent hydrogen atom, a halogen atom, a substituted or unsubstituted aryl group having 6 to 40 carbon atoms, a substituted or unsubstituted aryloxyl group having 6 to 40 carbon atoms, a substituted or unsubstituted heteroaryl group having 3 to 40 carbon atoms, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms or a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, and Ar⁴ each represent a substituted or unsubstituted aryl group having 6 to 40 carbon atoms or a substituted or unsubstituted heteroaryl group having 3 to 40 carbon atoms.